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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,140	03/29/2006	Gerardus P. Karman	GB 030176	7741

24737 7590 06/02/2009
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
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EXAMINER	
SPAR, ILANA L	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
06/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/574,140	KARMAN ET AL.	
	Examiner	Art Unit	
	ILANA SPAR	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-36 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of copending Application No. 10/574,142. Although the conflicting claims are not identical, they are not patentably distinct from each other because both inventions are directed to modification of an optical characteristic by controlling the intensity/grey scale level of the data. Claim 1 of the current invention teaches a display panel and driver of a three dimensional image display device, and an intensity compensation device that compensates for the viewing angle. Claim 1 of the copending application teaches the same display panel and driver of a three dimensional image display device, and a grey

scale compensation device that compensates for the viewing angle. Intensity of the data and grey scale of the data are equivalent concepts, such that the current and copending applications carry out the same function and are not patentably distinct.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 35 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not discuss a computer program product or computer readable medium, nor does it mention an electronic data transmission, and should be amended to do so. Additionally, any amendments to the specification should explicitly define a computer readable medium and electronic data transmission to only include statutory classes to avoid a rejection under 35 USC § 101.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 35 and 36 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter. In claim 35, 'a computer readable medium' is not defined in the specification to include only statutory subject matter, and therefore is interpreted to include such non-statutory classes as carrier signals. In claim 36, 'electronic data transmission' is interpreted to include such non-statutory classes as carrier signals. The specification should be amended to provide a description of a computer readable medium and electronic data transmission which includes only statutory classes.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 22, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Balogh (US Published Patent Application 2001/0028356).

With reference to claim 1, Balogh teaches a display device for displaying a three dimensional image such that different views are displayed according to the viewing angle, the display device including:

a display panel having a plurality of separately addressable pixels for displaying said image, the pixels being grouped such that different pixels in a group correspond to different views of the image, each pixel in a group being positioned relative to a

respective discrete light source (see paragraph 32, lines 3-4 and paragraph 39, lines 1-7);

a display driver for controlling an optical characteristic of each pixel to generate an image according to received image data (see paragraph 47); and

an intensity compensation device for further controlling said optical characteristic of pixels within a group to compensate for an angular size of view, of the respective light source, via said pixels (see paragraph 6 and paragraph 49, lines 2-9).

With reference to claim 2, Balogh teaches all that is required with reference to claim 1, and further teaches a back panel for providing a plurality of said discrete light sources, each group of pixels in the display panel being positioned to receive light from a respective one of the discrete light sources (see paragraph 34, lines 1-3).

With reference to claim 3, Balogh teaches all that is required with reference to claim 2, and further teaches that the back panel provides a plurality of line sources of illumination (see paragraph 8, lines 3-6).

With reference to claim 4, Balogh teaches all that is required with reference to claim 2, and further teaches that the back panel provides a plurality of point sources of illumination (see paragraph 34, lines 1-3).

With reference to claim 5, Balogh teaches all that is required with reference to claim 2, and further teaches that the display panel is a light-transmissive display panel adapted for viewing from a side opposite to the side on which the back panel is located (see paragraph 7, lines 1-5).

With reference to claim 22, Balogh teaches a method for displaying a three dimensional image on a display device such that different views of the image are displayed according to the viewing angle, the method comprising the steps of:

processing image data to form pixel intensity data values for each one of a plurality of separately addressable pixels in display panel, the pixels being grouped such that different pixels in a group correspond to different views of the image, and each pixel in a group being positioned relative to a respective discrete light source, the pixel intensity data values each for controlling an optical characteristic of a respective pixel to generate the image (see paragraph 32, lines 3-4, paragraph 39, lines 1-7, and paragraph 47);

applying intensity correction values to at least some pixel data values within each group to compensate for an angular size of view, of the respective light source, via said pixels (see paragraph 49, lines 2-9 and paragraph 6); and

using the corrected pixel data values to drive pixels of the display panel to generate said image (see paragraph 6).

With reference to claim 35, Balogh teaches all that is required with reference to claim 22, and it is further inherent that a display as taught by Balogh (see claim 1) would be controlled by a computer, such that the method of claim 22 would be carried out according to instructions provided from a computer program stored in the computer.

With reference to claim 36, Balogh teaches all that is required with reference to claim 22, and it is further inherent that a display as taught by Balogh (see claim 1) would

be controlled by a computer, such that the method of claim 22 would be carried out according to instructions provided from a computer program stored in the computer.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balogh in view of Moseley et al. (US Published Patent No. 2001/0001566).

With reference to claim 6, Balogh teaches all that is required with reference to claim 1, but fails to teach a lenticular array.

Moseley et al. teaches a lenticular array positioned adjacent to the display panel, each lenticle within the array focusing light from selected pixels in the display panel (see paragraph 2, lines 14-17).

It would have been obvious to one of ordinary skill in the art at the time of invention that a lens (or multiple lenses) may be used to focus light in a particular

direction. It is further known to use lenticular arrays with stereoscopic display devices; therefore, it would have been obvious to use a lenticular array in which a separate lenticle is used to focus the light from each individual light source, which corresponds to each separate group of pixels.

With reference to claim 7, Balogh and Moseley et al. teach all that is required with reference to claim 6, and Moseley et al. further teaches that each lenticle within the array is associated with a said group of pixels (see paragraph 2, lines 14-17).

11. Claims 8, 12, 13, 19-21, 23, 25, 26, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balogh in view of Mochizuki (US Patent No. 6,386,720).

With reference to claim 8, Balogh teaches all that is required with reference to claim 1, but fails to teach that the optical characteristic is a light transmission characteristic and the display driver and intensity compensation device are adapted to control the amount of light passing through each pixel according to an image to be displayed.

Mochizuki teaches that the optical characteristic is a light transmission characteristic and the display driver and intensity compensation device are adapted to control the amount of light passing through each pixel according to an image to be displayed (see column 3, lines 25-37).

It would have been obvious to one of ordinary skill in the art at the time of invention that by regulating the intensity of the light being emitted, it is possible to alter the light being transmitted through the display such that the light sources of the pixels

that transmit less light can be driven at a higher intensity than the light sources of the pixels that transmit more light to equalize the amount of light being transmitted across the entire display.

With reference to claim 12, Balogh and Mochizuki teach all that is required with reference to claim 8, and Mochizuki further teaches that the intensity compensation device is adapted to adjust a pixel drive voltage and/or current received from the display driver (see column 4, lines 5-11).

With reference to claim 13, Balogh and Mochizuki teach all that is required with reference to claim 12, and Mochizuki further teaches that the intensity compensation device provides a voltage and/or current offset to the pixel drive voltage and/or current received from the display driver (see column 4, lines 5-11).

With reference to claim 19, Balogh teaches all that is required with reference to claim 1, but fails to teach that the inherent optical characteristics of the display panel are configured such that viewing angle dependence is reduced or substantially minimised relative to the y-axis and the intensity compensation device serves to reduce or substantially minimise viewing angle dependence relative to an axis that is transverse to the y-axis.

Mochizuki teaches that the inherent optical characteristics of the display panel are configured such that viewing angle dependence is reduced or substantially minimised relative to the y-axis and the intensity compensation device serves to reduce or substantially minimise viewing angle dependence relative to an axis that is transverse to the y-axis (see column 5, line 66 to column 6, line 11).

It would have been obvious to one of ordinary skill in the art at the time of invention that on-axis pixels would not be affected by viewing angle dependence, but that pixels on either side of the x- or y-axes would be, and that any pixels can be compensated for using the above process as necessary to reduce intensity discrepancies.

With reference to claim 20, Balogh and Mochizuki teach all that is required with reference to claim 19, and Mochizuki further teaches that the intensity compensation device serves to reduce or substantially minimise viewing angle dependence relative to an axis that is orthogonal to the y-axis (i.e. the x-axis) (see column 5, line 66 to column 6, line 11).

With reference to claim 21, Balogh and Mochizuki teach all that is required with reference to claim 20, and Mochizuki further teaches that the x-axis is defined as the horizontal axis when the object is in normal use, and the y-axis is defined as the vertical axis when the object is in normal use (see column 5, line 66 to column 6, line 11 and Figure 10).

With reference to claim 23, Balogh teaches all that is required with reference to claim 22, but fails to teach that the optical characteristic is a light transmission characteristic and the intensity correction values applied are adapted to control the amount of light from the respective discrete light source passing through each pixel according to a three dimensional image to be displayed.

Mochizuki teaches that the optical characteristic is a light transmission characteristic and the intensity correction values applied are adapted to control the

amount of light from the respective discrete light source passing through each pixel according to a three dimensional image to be displayed (see column 3, lines 25-37).

It would have been obvious to one of ordinary skill in the art at the time of invention that by regulating the intensity of the light being emitted, it is possible to alter the light being transmitted through the display such that the light sources of the pixels that transmit less light can be driven at a higher intensity than the light sources of the pixels that transmit more light to equalize the amount of light being transmitted across the entire display.

With reference to claim 25, Balogh teaches all that is required with reference to claim 22, but fails to teach that the correction values are selected so as to substantially normalise an intensity displayed by a group of pixels to be independent of viewing angle.

Mochizuki teaches that the correction values are selected so as to substantially normalise an intensity displayed by a group of pixels to be independent of viewing angle (see column 3, lines 25-37).

It would have been obvious to one of ordinary skill in the art at the time of invention that by regulating the intensity of the light being emitted, it is possible to alter the light being transmitted through the display such that the light sources of the pixels that transmit less light can be driven at a higher intensity than the light sources of the pixels that transmit more light to equalize the amount of light being transmitted across the entire display.

With reference to claim 26, Balogh teaches all that is required with reference to claim 22, but fails to teach that the intensity correction values are used to adjust a pixel drive voltage and/or current applied to the display panel.

Mochizuki teaches that the intensity correction values are used to adjust a pixel drive voltage and/or current applied to the display panel (see column 4, lines 5-11).

It would have been obvious to one of ordinary skill in the art at the time of invention that the backlight is controlled by application of voltages or currents which indicate when and at what intensity the backlight should operate. It would therefore be obvious that in order to change the intensity of the backlight, it is necessary to adjust the backlight control voltages or currents.

With reference to claim 32, Balogh teaches all that is required with reference to claim 22, but fails to teach the step of configuring the inherent optical characteristics of the display panel such that viewing angle dependence is reduced or substantially minimised relative to the y-axis and applying said intensity correction values so as to reduce or substantially minimise viewing angle dependence relative to an axis that is transverse to the y-axis.

Mochizuki teaches the step of configuring the inherent optical characteristics of the display panel such that viewing angle dependence is reduced or substantially minimised relative to the y-axis and applying said intensity correction values so as to reduce or substantially minimise viewing angle dependence relative to an axis that is transverse to the y-axis (see column 5, line 66 to column 6, line 11).

It would have been obvious to one of ordinary skill in the art at the time of invention that on-axis pixels would not be affected by viewing angle dependence, but that pixels on either side of the x- or y-axes would be, and that any pixels can be compensated for using the above process as necessary to reduce intensity discrepancies.

With reference to claim 33, Balogh and Mochizuki teach all that is required with reference to claim 32, and Mochizuki further teaches that the intensity correction values are applied to reduce or substantially minimise viewing angle dependence relative to an axis that is orthogonal to the y-axis (i.e. the x-axis) (see column 5, line 66 to column 6, line 11).

With reference to claim 34, Balogh and Mochizuki teach all that is required with reference to claim 33, and Mochizuki further teaches that the x-axis is the horizontal axis when the display panel is in normal use, and the y-axis is the vertical axis when the display panel is in normal use (see column 5, line 66 to column 6, line 11 and Figure 10).

12. Claims 9, 11, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balogh in view of Sawabe (US Patent No. 7,113,159).

With reference to claim 9, Balogh teaches all that is required with reference to claim 1, but fails to teach a look-up table.

Sawabe teaches that the intensity compensation device comprises a look-up table containing correction values to be applied in respect of each pixel within a group (see column 7, lines 41-44).

It would have been obvious to one of ordinary skill in the art at the time of invention to use a look-up table to modify the data applied to each pixel because the correction values for each viewing angle are fixed for each pixel position, such that the use of a look-up table can save calculation time as correction values are applied to the pixel data.

With reference to claim 11, Balogh and Sawabe teach all that is required with reference to claim 9, and Sawabe further teaches that the look-up table includes substitution values or offset values as a function of viewing angle to be applied to a frame store (see column 7, lines 41-48).

With reference to claim 24, Balogh teaches all that is required with reference to claim 22, but fails to teach a look-up table.

Sawabe teaches that the intensity correction values are obtained from a look-up table containing correction values to be applied in respect of each pixel within a group (see column 7, lines 41-44).

It would have been obvious to one of ordinary skill in the art at the time of invention to use a look-up table to modify the data applied to each pixel because the correction values for each viewing angle are fixed for each pixel position, such that the use of a look-up table can save calculation time as correction values are applied to the pixel data.

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Balogh in view of Sawabe as applied to claim 9 above, and further in view of Mochizuki.

Balogh and Sawabe teach all that is required with reference to claim 9, but fail to teach that the correction values are selected so as to substantially normalise an intensity displayed by a group of pixels to be independent of viewing angle.

Mochizuki teaches that the correction values are selected so as to substantially normalise an intensity displayed by a group of pixels to be independent of viewing angle (see column 3, lines 25-37).

It would have been obvious to one of ordinary skill in the art at the time of invention that by regulating the intensity of the light being emitted, it is possible to alter the light being transmitted through the display such that the light sources of the pixels that transmit less light can be driven at a higher intensity than the light sources of the pixels that transmit more light to equalize the amount of light being transmitted across the entire display.

14. Claims 14-17 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balogh in view of Akamatsu (US Patent No. 6,172,807).

With reference to claim 14, Balogh teaches all that is required with reference to claim 1, but fails to teach that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of a linear viewing angle dimension of each pixel.

Akamatsu teaches that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of a linear viewing angle dimension of each pixel (see column 5, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time of invention that the linear dimension of a pixel will affect the amount of light able to be transmitted through the pixel, and that by compensating for the length of the pixel, transmission can be increased or decreased as necessary to create an allover equal brightness level.

With reference to claim 15, Balogh teaches all that is required with reference to claim 1, but fails to teach that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of an areal viewing angle dimension of each pixel.

Akamatsu teaches that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of an areal viewing angle dimension of each pixel (see column 6, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of invention that the areal dimension of a pixel will affect the amount of light able to be transmitted through the pixel, and that by compensating for the area of the pixel, transmission can be increased or decreased as necessary to create an allover equal brightness level.

With reference to claim 16, Balogh teaches all that is required with reference to claim 1, but fails to teach that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of the angle subtended by a linear dimension of a pixel relative to its respective discrete light source.

Akamatsu teaches that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of the angle subtended by a linear dimension of a pixel relative to its respective discrete light source (see column 5, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time of invention that the viewing angle transmission deficiency arises due to a pixel displaced linearly from the light source, such that the angle formed between the pixel and the light source determines the amount of decrease in light transmission. Therefore, by compensating for this angle, transmission can be increased as necessary to create an allover equal brightness level.

With reference to claim 17, Balogh teaches all that is required with reference to claim 1, but fails to teach that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of the angle subtended by an areal dimension of a pixel relative to its respective discrete light source.

Akamatsu teaches that the intensity compensation device is adapted to further control said optical characteristic of pixels within a group as a function of the angle subtended by an areal dimension of a pixel relative to its respective discrete light source (see column 6, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of invention that the viewing angle transmission deficiency arises due to a pixel displaced both vertically and horizontally from the light source, such that the angle formed

between the pixel and the light source determines the amount of decrease in light transmission. Therefore, by compensating for this angle, transmission can be increased as necessary to create an allover equal brightness level.

With reference to claim 27, Balogh teaches all that is required with reference to claim 22, but fails to teach that the intensity correction values are determined according to a function of a linear viewing angle dimension of each pixel in a group.

Akamatsu teaches that the intensity correction values are determined according to a function of a linear viewing angle dimension of each pixel in a group (see column 5, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time of invention that the linear dimension of a pixel will affect the amount of light able to be transmitted through the pixel, and that by compensating for the length of the pixel, transmission can be increased or decreased as necessary to create an allover equal brightness level.

With reference to claim 28, Balogh teaches all that is required with reference to claim 22, but fails to teach that the intensity correction values are determined according to a function of an areal viewing angle dimension of each pixel in a group.

Akamatsu teaches that the intensity correction values are determined according to a function of an areal viewing angle dimension of each pixel in a group (see column 6, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of invention that the areal dimension of a pixel will affect the amount of light able to be

transmitted through the pixel, and that by compensating for the area of the pixel, transmission can be increased or decreased as necessary to create an allover equal brightness level.

With reference to claim 29, Balogh teaches all that is required with reference to claim 22, but fails to teach that the intensity correction values are determined according to a function of the angle subtended by a linear dimension of a pixel relative to its respective discrete light source.

Akamatsu teaches that the intensity correction values are determined according to a function of the angle subtended by a linear dimension of a pixel relative to its respective discrete light source (see column 5, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time of invention that the viewing angle transmission deficiency arises due to a pixel displaced linearly from the light source, such that the angle formed between the pixel and the light source determines the amount of decrease in light transmission. Therefore, by compensating for this angle, transmission can be increased as necessary to create an allover equal brightness level.

With reference to claim 30, Balogh teaches all that is required with reference to claim 22, but fails to teach that the intensity correction values determined according to a function of the angle subtended by an areal dimension of a pixel relative to its respective discrete light source.

Akamatsu teaches that the intensity correction values determined according to a function of the angle subtended by an areal dimension of a pixel relative to its respective discrete light source (see column 6, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of invention that the viewing angle transmission deficiency arises due to a pixel displaced both vertically and horizontally from the light source, such that the angle formed between the pixel and the light source determines the amount of decrease in light transmission. Therefore, by compensating for this angle, transmission can be increased as necessary to create an allover equal brightness level.

Allowable Subject Matter

15. Claims 18 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ILANA SPAR whose telephone number is (571)270-7537. The examiner can normally be reached on Monday-Thursday 8:00-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571)272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629

ILS